# 6EU7

## High-Mu Twin Triode

**9-PIN MINIATURE TYPE**

**For High-Fidelity Audio-Amplifier Applications Critical as to Noise and Hum**

**GENERAL DATA**

**Electrical:**

| | | |
|---|---|---|
| Heater, for Unipotential Cathodes: | | |
| Voltage (AC or DC) | 6.3 ± 10% | volts |
| Current at 6.3 volts | 0.3 | amp |
| Direct Interelectrode Capacitances (Each Unit, Approx.): | | |
| Grid to plate | 1.5 | μμf |
| Grid to cathode and heater | 1.6 | μμf |
| Plate to cathode and heater | 0.2 | μμf |

**Equivalent Noise and Hum Voltage (Referenced to Grid, Each Unit):**

Average Value (RMS) . . . . . 1.8 μvolts

Measured in "true rms" units under the following conditions: Heater volts (AC)= 6.3; center-tap of heater transformer connected to ground; plate supply volts (DC)= 250; plate load resistor (megohms)= 0.1; cathode resistor (ohms)= 2700; cathode bypass capacitor (μf)= 100; grid resistor (ohms)= 0; amplifier frequency range 25 to 10000 cps.

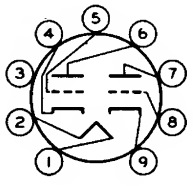
**Characteristics, Class $A_1$ Amplifier (Each Unit):**

| | | | |
|---|---|---|---|
| Plate Voltage | 100 | 250 | volts |
| Grid Voltage | -1 | -2 | volts |
| Amplification Factor | 100 | 100 | |
| Plate Resistance (Approx.) | 80000 | 62500 | ohms |
| Transconductance | 1250 | 1600 | μmhos |
| Plate Current | 0.5 | 1.2 | ma |

**Mechanical:**

| | |
|---|---|
| Operating Position | Any |
| Maximum Overall Length | 2-3/16" |
| Maximum Seated Length | 1-15/16" |
| Length, Base Seat to Bulb Top (Excluding tip) | 1-9/16" ± 3/32" |
| Diameter | 0.750" to 0.875" |
| Dimensional Outline | See *General Section* |
| Bulb | T6-1/2 |
| Base | Small-Button Noval 9-Pin (JEDEC No.E9-1) |
| Basing Designation for BOTTOM VIEW | 9LS |

Pin 1 - Heater
Pin 2 - Heater
Pin 3 - No Connection
Pin 4 - Cathode of Unit No.2
Pin 5 - Grid of Unit No.2




Pin 6 - Plate of Unit No.2
Pin 7 - Plate of Unit No.1
Pin 8 - Grid of Unit No.1
Pin 9 - Cathode of Unit No.1

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## AMPLIFIER — Class $A_1$

*Values are for Each Unit*

**Maximum Ratings,** *Design-Maximum Values:*

| | | | |
|---|---|---|---|
| PLATE VOLTAGE | 330 | max. | volts |
| GRID VOLTAGE: | | | |
| Negative-bias value | 55 | max. | volts |
| Positive-bias value | 0 | max. | volts |
| PLATE DISSIPATION | 1.2 | max. | watts |
| PEAK HEATER-CATHODE VOLTAGE: | | | |
| Heater negative with respect to cathode | 200 | max. | volts |
| Heater positive with respect to cathode | 200▲ | max. | volts |

**Typical Operation as Resistance-Coupled Amplifier:**

*See RESISTANCE-COUPLED-AMPLIFIER CHART No.25 at front of this Section*

▲ The dc component must not exceed 100 volts.

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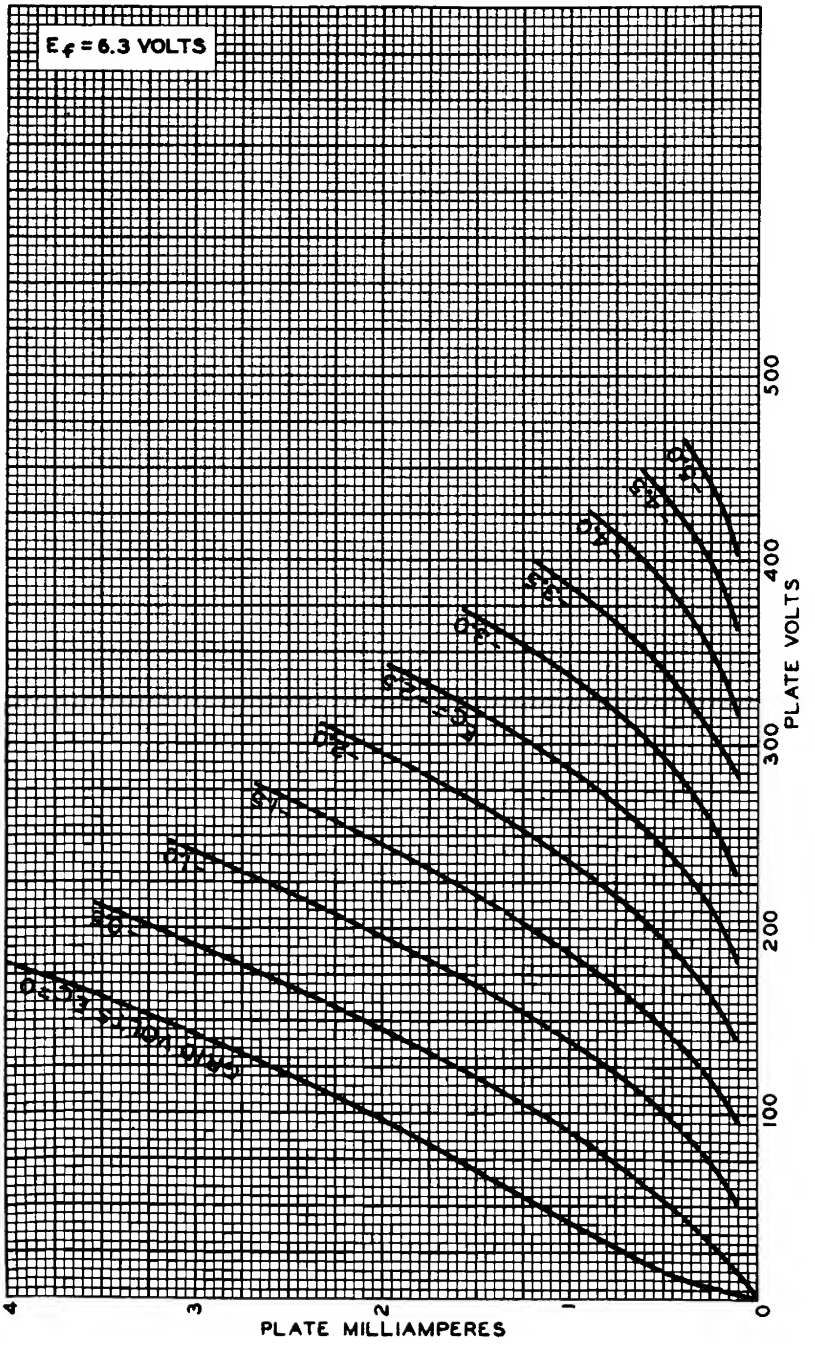
## AVERAGE PLATE CHARACTERISTICS
### Each Unit

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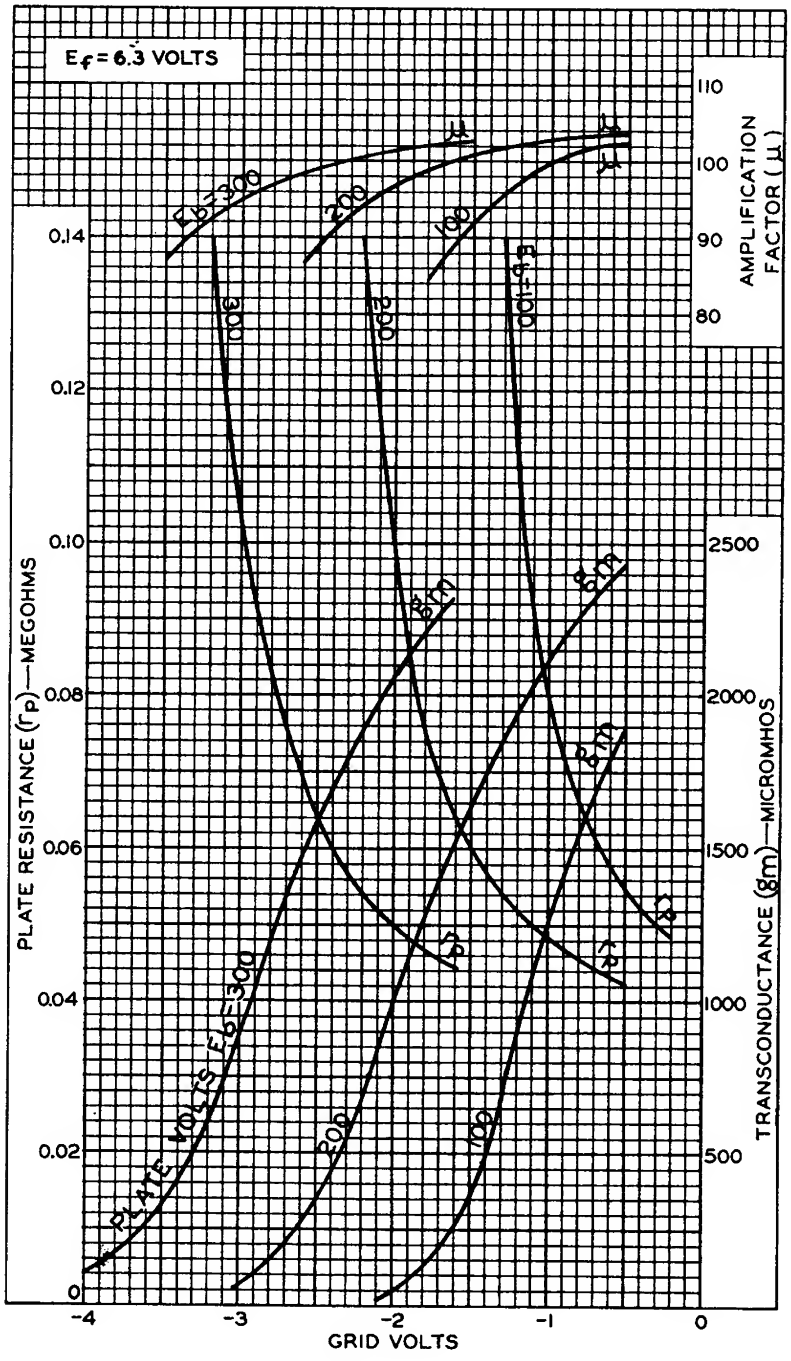
## AVERAGE CHARACTERISTICS
### Each Unit

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